NO 1 JANUARY 1991

1 **Message from the Editor**
Arthur K. Asbury, MD

Editorial

3 **Magnetic Resonance Imaging and Laboratory Aids in the Diagnosis of Multiple Sclerosis**
D. W. Paty, MD, D. E. McFarlin, MD, and W. I. McDonald, FRCP

Original Articles

6 **Correlation of Phasic Muscle Strength and Corticomotoneuron Conduction Time in Multiple Sclerosis**
W. van der Kamp, MD, A. Maertens de Noordhout, MD, P. D. Thompson, FRACP, J. C. Rothwell, PhD, B. L. Day, DPhil, and C. D. Marsden, DSc

13 **Developmental Regulation of Human Truncated Nerve Growth Factor Receptor**
Peter S. DiStefano, PhD, Margaret Clagett-Dame, PhD, Diane M. Chelsea, MS, and Rebekah Loy, PhD

21 **Elevated Alpha–Tumor Necrosis Factor Levels in Spinal Fluid From HIV-1–infected Patients with Central Nervous System Involvement**
L. M. E. Grimaldi, MD, G. V. Martino, MD, D. M. Franciotta, MD, R. Brustia, MD, A. Castagna, MD, R. Pristerà, MD, and A. Lazzarin, MD

26 **Neuroanatomy of Fragile X Syndrome: the Posterior Fossa**
Allan L. Reiss, MD, Elizabeth Aylward, PhD, Lisa S. Freund, PhD, Paramjit K. Joshi, MD, and R. Nick Bryan, MD

33 **Common T-Cell Receptor V_β Usage in Oligoclonal T Lymphocytes Derived from Cerebrospinal Fluid and Blood of Patients with Multiple Sclerosis**
Soon Jin Lee, PhD, Kai W. Wucherpfennig, MD, PhD, Staley A. Brod, MD, Deborah Benjamin, BS, Howard L. Weiner, MD, and David A. Hafler, MD

41 **Visual Dysfunction in Alzheimer's Disease: Relation to Normal Aging**
Alice Cronin-Golomb, PhD, Suzanne Corkin, PhD, Joseph F. Rizzo, MD, Jennifer Cohen, BA, John H. Growdon, MD, and Kathleen S. Banks, MA

53 **Major Differences in the Dynamics of Primary and Secondary Progressive Multiple Sclerosis**
Alan J. Thompson, MD, A. G. Kermode, MRCP, D. Wicks, PhD, D. G. MacManus, DCR, B. E. Kendall, FRCR, D. P. E. Kingsley, FRCR, and W. I. McDonald, FRCP

63 **The Functional Anatomy of Motor Recovery after Stroke in Humans: A Study with Positron Emission Tomography**
F. Chollet, MD, V. DiPiero, MD, R. J. S. Wise, MD, D. J. Brooks, MD, R. J. Dolan, MD, and R. S. J. Frackowiak, MD

72 **Local Cerebral Glucose Utilization in Rats with Petit Mal–like Seizures**
Astrid Nehlig, PhD, Marguerite Vergnes, PhD, Christian Marescaux, MD, Sylvette Boyet, and Beatrice Lannes, MD

78 **Lymphoma, Motor Neuron Diseases, and Amyotrophic Lateral Sclerosis**
D. S. Younger, L. P. Rowland, N. Latov, A. P. Hays, D. J. Lange, W. Sherman, G. Inghirami, M. A. Pesce, D. M. Knowles, J. Powers, J. R. Miller, M. R. Fetell, and R. E. Lovelace

87 **Nerve Growth Factor Prevents Toxic Neuropathy in Mice**
Stuart C. Apfel, MD, Richard B. Lipton, MD, Joseph C. Arezzo, PhD, and John A. Kessler, MD

Brief Communications

91 **Localization of ^{3}H-Dihydroergotamine–binding Sites in the Cat Central Nervous System: Relevance to Migraine**
Peter J. Goadsby, MD, PhD, and Andrew L. Gundlach, PhD

95 **Acceleration of Scrapie in Trisomy 16↔Diploid Aggregation Chimeras**
Charles J. Epstein, MD, Dallas B. Foster, MS, Stephen J. DeArmond, MD, and Stanley B. Prusiner, MD

97 **Apparent Response of Subacute Sclerosing Panencephalitis to Intrathecal Interferon Alpha**
Masahito Miyazaki, MD, Toshiaki Hashimoto, MD, Kayo Fujino, MD, Tomoko Goda, MD, Masanobu Tayama, MD, and Yasuhiro Kuroda, MD

100 **Quinolinic Acid Catabolism Is Increased in Cerebellum of Patients with Dominantly Inherited Olivopontocerebellar Atrophy**
Stephen J. Kish, PhD, Fu Du, PhD, Deborah A. Parks, BSc, Yves Robitaille, MD, Melvyn J. Ball, MD, Lawrence Schut, MD, Oleh Hornykiewicz, MD, and Robert Schwarcz, PhD

104 **Genetic Cause of a Juvenile Form of Tay-Sachs Disease in a Lebanese Child**
Rose-Mary Boustany, MD, Akemi Tanaka, MD, Junji Nishimoto, MD, and Kunihiko Suzuki, MD

Obituary

108 **Russell N. DeJong, 1907–1990**
Sid Gilman, MD

Letters

110 **Excitatory Amino Acids in Amyotrophic Lateral Sclerosis**
David C. Spink, PhD, and David L. Martin, PhD

110 **Surgical Treatment for Infantile Spasms?**
Richard A. Hrachovy, MD, James D. Frost, Jr, MD, Daniel G. Glaze, MD, and Peter Kellaway, PhD

111 **Reply**
Harry T. Chugani, MD, W. Donald Shields, MD, D. Alan Shewmon, MD, and Warwick J. Peacock, MD

Regular Departments

32 **Correction**

113 **Books**

NO 2 FEBRUARY 1991

Neurological Progress

115 **Intraspinal Transplants**
Alan Tessler, MD

Original Articles

124 **Genetic Mapping of "Lubag" (X-linked Dystonia-Parkinsonism) in a Filipino Kindred to the Pericentromeric Region of the X Chromosome**
Kirk C. Wilhelmsen, MD, PhD, Daniel E. Weeks, PhD, Torbjoern G. Nygaard, MD Carol B.Moskowitz, RN, Raymond L. Rosales, MD, Daniel C. dela Paz, MD, Eufemio E. Sobrevega, MD, Stanley Fahn, MD, and T. Conrad Gilliam, PhD

132 **Tests of EEG Localization Accuracy Using Implanted Sources in the Human Brain**
B. Neil Cuffin, PhD, David Cohen, PhD, Kazutomo Tunokuchi, MS, Roman Maniewaki, PhD, Christopher Purcell, PhD, G. rees Cosgrove, MD, John Ives, BSc, John Kennedy, MD, and Donald Schomer, MD

139 **Cytomegalovirus Neuropathy in Acquired Immunodeficiency Syndrome: A Clinical and Pathological Study**
G. Said, C. Lacroix, P. Chemouilli, C. Goulon-Goeau, E. Roullet, D. Penaud, T. de Broucker, G. Meduri, D. Vincent, M. Torchet, D. Vittcoq, C. Leport, and J. L. Vildé

147 **The Predictive Value of Intrathecal Immunoglobulin Synthesis and Magnetic Resonance Imaging in Acute Isolated Syndromes for Subsequent Development of Multiple Sclerosis**
Mohammad K. Sharief, MB ChB, MPhil, and Edward J. Thompson, PhD, MRCPath

152 **Human Microglial Cells: Characterization in Cerebral Tissue and in Primary Culture, and Study of Their Susceptibility to HIV-1 Infection**
Sylviane Peudenier, MD, Christiane Hery, Luc Montagnier, MD, and Marc Tardieu, MD

162 **Glutamate-, Glutaminase-, and Taurine-immunoreactive Neurons Develop Neurofibrillary Tangles in Alzheimer's Disease**
Neil W. Kowall, MD, and M. Flint Beal, MD

168 **HLA Class II Antigens and DNA Restriction Fragment Length Polymorphism in Myasthenia Gravis in Japan**
Kazuyuki Morita, MD, Junko Moriuchi, MD, PhD, Hidetoshi Inoko, PhD, Kimiyoshi Tsuji, MD, PhD, and Shigeru Arimori, MD, PhD

175 **Hippocampal Sclerosis in Temporal Lobe Epilepsy Demonstrated by Magnetic Resonance Imaging**
Samuel F. Berkovic, MD, Frederick Andermann, MD, André Olivier, MD, Roméo Ethier, MD, Denis Melanson, MD, Yvon Robitaille, MD, Ruben Kuzniecky, MD, Terence Peters, MD, and William Feindel, MD

183 **Loss of Chromosome 22 Alleles in Human Sporadic Spinal Schwannomas**
Bertrand Fontaine, MD, PhD, Mark P. Hanson, AB, Jean Paul VonSattel, MD, Robert L. Martuza, MD, and James F. Gusella, PhD

187 **Capillary Prolactin Measurement for Diagnosis of Seizures**
Robert S. Fisher, MD, PhD, Daniel W. Chan, PhD, Mary Bare, MSPH, RN, and Ronald P. Lesser, MD

191 **Effects of Head Trauma from Motor Vehicle Accidents on Parkinson's Disease**
Christopher G. Goetz, MD, and Glenn T. Stebbins, PhD

194 **Increased HTLV-I Proviral DNA in HTLV-I–associated Myelopathy: A Quantitative Polymerase Chain Reaction Study**
Jun-ichi Kira, MD, Yoshio Koyanagi, MD, Takeshi Yamada, MD, Yasuto Itoyama, MD, Ikuo Goto, MD, Naoki Yamamoto, MD, Hiroyuki Sasaki, MD, and Yoshiyuki Sakaki, MD

202 **Quinolinic Acid in Cerebrospinal Fluid and Serum in HIV-1 Infection: Relationship to Clinical and Neurological Status**
Melvyn P. Heyes, PhD, Bruce J. Brew, MD, Alex Martin, PhD, Richard W. Price, MD, Andres M. Salazar, MD, John J. Sidtis, PhD, James A. Yergey, PhD, M. Maral Mouradian, MD, Abigail E. Sadler, PhD, John Keilp, MD, David Rubinow, MD, and Sanford P. Markey, PhD

Brief Communications

210 **Intracerebral Hemorrhage Related to Cerebral Amyloid Angiopathy and t-PA Treatment**
William W. Pendlebury, MD, Elizabeth D. Iole, MD, Russell P. Tracy, PhD, and Barbara A. Dill, BA

213 **Myoclonus in Adult Huntington's Disease**
Caryn M. Vogel, MD, Ivo Drury, MB, BCh, L. Cass Terry, MD, PhD, and Anne B. Young, MD, PhD

215 **Continuous Muscle Fiber Activity, Peripheral Neuropathy, and Thymoma**
A. García-Merino, MD, A. Cabello, MD, J. S. Mora, MD, and H. Liaño, MD

218 **Regional Variation in Brain Lactate in Leigh Syndrome by Localized ^{1}H Magnetic Resonance Spectroscopy**
John A. Detre, MD, Zhiyue Wang, PhD, Andrew R. Bogdan, PhD, Debre A. Gusnard, MD, Carolyn A. Bay, MD, Peter M. Bingham, MD, and Roger A. Zimmerman, MD

221 **Cerebrospinal Fluid Dynamics in the Tardive Cauda Equina Syndrome of Ankylosing Spondylitis**
Christian Confavreux, MD, Jean-Paul Larbre, MD, Edouard Lejeune, MD, Marc Sindou, MD, and Gilbert Aimard

Letters

224 **Multiple Electroencephalograph Electrodes for Spike Detection in Partial Complex Seizures**
R. Mark Sadler, MD, FRCP(C), and Warren T. Blume, MD, FRCP(C)

224 **Reply**
Douglas S. Goodin, MD, Michael J. Aminoff, MD, FRCP, and Kenneth D. Laxer, MD

225 **Editor's Note**
Mark M. Stecker, MD, and Michael E. Selzer, MD, PhD

226 **Cyclosporine and Multiple Sclerosis**
M. P. Pender, MD, PhD, FRACP

226 **Reply**
Jerry S. Wolinsky, MD

Regular Departments

227 **Books**

NO 3 MARCH 1991

Neurological Progress

231 **Cerebral Hemodynamics in Ischemic Cerebrovascular Disease**
William J. Powers, MD

Original Articles

241 **Anti-Ri: An Antibody Associated with Paraneoplastic Opsoclonus and Breast Cancer**
F. Antonio Luque, MD, PhD, Henry M. Furneaux, PhD, Reuven Ferziger, AB, Marc K. Rosenblum, MD, Shirley H. Wray, MD, PhD, S. Clifford Schold, Jr, MD, Michael J. Glantz, MD, Kurt A. Jaeckle, MD, Haim Biran, MD, Martin Lesser, MD, William A. Paulsen, MD, Mary E. River, MD, and Jerome B. Posner, MD

252 **Parent-Child Concordance in Multiple Sclerosis**
A. D. Sadovnick, PhD, D. Bulman, MSc, and G. C. Ebers, MD

256 **Loss of High-Affinity Agonist Binding to M1 Muscarinic Receptors in Alzheimer's Disease: Implications for the Failure of Cholinergic Replacement Therapies**
Donna D. Flynn, PhD, David A. Weinstein, BS, and Deborah C. Mash, PhD

263 **Abnormal Cerebral Glucose Metabolism in Long-term Survivors of Childhood Acute Lymphocytic Leukemia**
Peter C. Phillips, MD, James R. Moeller, PhD, John J. Sidtis, PhD, Vijay Dhawan, PhD, Peter G. Steinherz, MD, Steven C. Strother, PhD, James Z. Ginos, PhD, and David A. Rottenberg, MD

272 **Peripheral Neuropathy after Chronic Endoneurial Ischemia**
John T. Sladky, MD, Raymond L. Tschoepe, BA, Joel H. Greenberg, PhD, and Mark J. Brown, MD

279 **The Hypothalamic Lateral Tuberal Nucleus in Alzheimer's Disease**
Berry Kremer, MD, Dick Swaab, MD, Gerard Bots, MD, Bart Fisser, Rivka Ravid, PhD, and Raymund Roos, MD

285 **Early Loss of Astrocytes in Herpes Simplex Virus–induced Central Nervous System Demyelination**
Yasuto Itoyama, MD, Tsuyoshi Sekizawa, MD, Harry Openshaw, MD, Kyuya Kogure, MD, and Ikuo Goto, MD

293 **Cortical Dysplasia in Temporal Lobe Epilepsy: Magnetic Resonance Imaging Correlations**
Ruben Kuzniecky, MD, Julio H. Garcia, MD, Edward Faught, MD, and Richard B. Morawetz, MD

299 **Heterogeneity of the T-Cell Receptor β Gene Rearrangements Generated in Myelin Basic Protein–specific T-Cell Clones Isolated from a Patient with Multiple Sclerosis**
John R. Richert, MD, Eve D. Robinson, BS, Armead H. Johnson, PhD, Cynthia A. Bergman, MD, Ljubo J. Dragovic, MD, Nancy L. Reinsmoen, PhD, and Carolyn Katovich Hurley, PhD

307 **Calcium Channel Autoantibodies in the Lambert-Eaton Myasthenic Syndrome**
Katherine Leys, MSc, Bethan Lang, PhD, Irene Johnston, BSc, and John Newsom-Davis, MD

315 **Anatomical Left-Right Asymmetry of Language-related Temporal Cortex Is Different in Left- and Right-Handers**
Helmuth Steinmetz, MD, Jens Volkmann, Lutz Jäncke, PhD, and Hans-Joachim Freund, MD

320 **A Genetic Study of Idiopathic Focal Dystonias**
H. M. Waddy, FRACP, N. A. Fletcher, MD, A. E. Harding, FRCP, and C. D. Marsden, FRS

325 **A Selective Loss of Somatostatin in the Hippocampus of Patients with Temporal Lobe Epilepsy**
Richard J. Robbins, MD, Michael L. Brines, MD, PhD, Jung H. Kim, MD, Thomas Adrian, PhD, Nihal de Lanerolle, PhD, Susan Welsh, MS, and Dennis D. Spencer, MD

Brief Communications

333 **Analysis of Retroviral Sequences in the Spinal Form of Multiple Sclerosis**
Flore Rozenberg, MD, Suzie Lefebvre, PhD, Catherine Lubetzki, MD, Pierre Lebon, MD, Olivier Lyon-Caen, MD, Michel Brahic, MD, PhD, and Jean-François Bureau, MD, PhD

336 **Correction of Non–24-Hour Sleep/Wake Cycle by Melatonin in a Blind Retarded Boy**
Lars Palm, MD, Gösta Blennow, MD, PhD, and Lennart Wetterberg, MD, PhD

Letters

340 **Torsion Dystonia in Jews and Non-Jews**
Amos D. Korczyn, MD, MSc

340 **Reply**
Roger N. Rosenberg, MD

341 **Alzheimer A4 Peptide, Gamma-Trace, Leukoencephalopathy, and Hereditary Cerebral Hemorrhage with Amyloidosis—DutchType**
Joost Haan, MD, and Raymond A. C. Roos, MD

341 **Reply**
H. V. Vinters, MD

342 **Blood Lactate in Parkinson's Disease**
Donato Di Monte, MD, James W. Tetrud, MD, and J. William Langston, MD

343 **Multiple Sclerosis, Human T-Lymphotropic Virus Type I, and Human Endogenous Retrovirus Sequences**
Gary F. Cabirac, PhD, Dana Ries, BS, and Ronald S. Murray, MD

NO 4 APRIL 1991

Editorial

345 **The Continuing Challenge of Primary Brain Tumor Management: The Contribution of Positron Emission Tomography**
John C. Mazziotta, MD, PhD

Original Articles

347 **Identification of Early Recurrence of Primary Central Nervous System Tumors by [^{18}F]Fluorodeoxyglucose Positron Emission Tomography**
Michael J. Glantz, MD, John M. Hoffman, MD, R. Edward Coleman, MD, Allan H. Friedman, MD, Michael W. Hanson, MD, Peter C. Burger, MD, James E. Herndon II, PhD, William J. Meisler, MD, and S. Clifford Schold, Jr, MD

356 **Antiepileptogenic Effects of Conventional Anticonvulsants in the Kindling Model of Epilepsy**
Jon M. Silver, MD, Cheolsu Shin, MD, and James O. McNamara, MD

364 **Mitochondrial DNA Deletions in Inherited Recurrent Myoglobinuria**
Kinji Ohno, MD, Masashi Tanaka, MD, PhD, Ko Sahashi, MD, Tohru Ibi, MD, Wataru Sato, MD, Tomoko Yamamoto, MD, Akira Takahashi, MD, and Takayuki Ozawa, MD, PhD

370 **Change in Pattern of Muscle Activity Following Botulinum Toxin Injections for Torticollis**
Douglas J. Gelb, MD, PhD, Don M. Yoshimura, MD, Richard K. Olney, MD, Daniel H. Lowenstein, MD, and Michael J. Aminoff, MD, FRCP

377 **BN Rats Do Not Reject F344 Brain Allografts Even after Systemic Sensitization**
Maciej Poltorak, MD, and William J. Freed, MD

389 **Late Onset Dementia with Argyrophilic Grains and Subcortical Tangles or Atypical Progressive Supranuclear Palsy?**
Eliezer Masliah, MD, Lawrence A. Hansen, MD, Sylvia Quijada, BS, Richard DeTeresa, BS, Michael Alford, BA, Joachim Kauss, MD, and Robert Terry, MD

397 **In Vitro Demyelination by Serum Antibody from Patients with Guillain-Barré Syndrome Requires Terminal Complement Complexes**
S. Sawant-Mane, PhD, M. B. Clark, PhD, and C. L. Koski, MD

405 **Putative Chromaffin Cell Survival and Enhanced Host-derived TH-Fiber Innervation Following a Functional Adrenal Medulla Autograft for Parkinson's Disease**
Jeffrey H. Kordower, PhD, Elizabeth Cochran, MD, Richard D. Penn, MD, and Christopher G. Goetz, MD

413 **Carbamazepine and Phenytoin Inhibit Somatostatin Release from Dispersed Cerebral Cells in Culture**
Seymour Reichlin, MD, PhD, and Stella Mothon

418 **Percutaneous Electrical Stimulation of Corticospinal Pathways at the Level of the Pyramidal Decussation in Humans**
Y. Ugawa, MD, J. C. Rothwell, PhD, B. L. Day, DPhil, P. D. Thompson, MD, and C. D. Marsden, DSc

428 **JC Virus Detection by In Situ Hybridization in Brain Tissue from Elderly Patients**
Mayumi Mori, MD, Hirokazu Kurata, MD, Masako Tajima, PhD, and Hiroyuki Shimada, MD

Editorial

433 **Is JC Virus Latent in Brain?**
Howard L. Lipton, MD

Brief Communications

435 **In Vivo Magnetic Resonance Spectroscopy of Brain and Muscle in a Type of Mitochondrial Encephalomyopathy (MERRF)**
P. M. Matthews, MD, DPhil, S. F. Berkovic, MD, FRACP, E. A. Shoubridge, PhD, F. Andermann, MD, FRCP(C), G. Karpati, MD, FRCP(C), S. Carpenter, MD, and D. Arnold, MD, FRCP(C)

438 **Magnetic Resonance Imaging of Creutzfeldt-Jacob Disease**
Walter J. Milton, MD, Scott W. Atlas, MD, Ehud Lavi, MD, and Joan E. Mollman, MD

440 **Attention Modulates Somatosensory Cerebral Blood Flow Response to Vibrotactile Stimulation as Measured by Positron Emission Tomography**
E. Meyer, PhD, S. S. G. Ferguson, BSc, R. J. Zatorre, PhD, B. Alivisatos, PhD, S. Marrett, MSc, A. C. Evans, PhD, and A. M. Hakim, MD, PhD

443 **Selective Impairment of Smooth-Pursuit Eye Movements Due to an Ischemic Lesion of the Basal Pons**
Peter Thier, MD, Alexander Bachor, Jürgen Faiss, MD, Johannes Dichgans, MD, and Eberhard Koenig, MD

448 **Adult Polyglucosan Body Disease: The Diagnostic Value of Axilla Skin Biopsy**
H. L. S. M. Busard, MD, A. A. W. M. Gabreëls-Festen, MD, W. O. Renier, MD, PhD, F. J. M. Gabreëls, MD, PhD, E. M. G. Joosten, MD, PhD, M. A. van 't Hof, MS, and J. B. M. Rensing, MD

451 **Cranial Neuropathy Associated with Primary Amyloidosis**
Ann E. Traynor, MD, Morie A. Gertz, MD, and Robert A. Kyle, MD

Letters

455 **Sjögren's Syndrome and Multiple Sclerosis**
Charles M. Poser, MD

455 **Reply**
J. Berciano, MD

455 **Reply**
Elaine Alexander, MD, PhD, and Henry McFarland, MD

456 **MELAS: A Family with Paternal Inheritance**
M. De Quick, MD, M. Lammens, MD, R. Dom, MD, and H. Carton, MD

Regular Departments

458 **Pertussis Immunization and the Central Nervous System**
Ad Hoc Committee for the Child Neurology Society Consensus Statement on Pertussis Immunization and the Central Nervous System

363 **Correction**

NO 5 MAY 1991

Editorial

461 **Nonaneurysmal Subarachnoid Hemorrhage**
Harold P. Adams, Jr, MD, and David Lee Gordon, MD

Original Articles

463 **The Clinical Course of Perimesencephalic Nonaneurysmal Subarachnoid Hemorrhage**
Gabriel J. E. Rinkel, MD, Eelco F. M. Wijdicks, MD, Marinus Vermeulen, MD, Djo Hasan, MD, Paul J. A. M. Brouwers, MD, and Jan van Gijn, MD

469 **Benign Familial Neonatal Convulsions: Evidence for Clinical and Genetic Heterogeneity**
Stephen G. Ryan, MD, Max Wiznitzer, MD, Charlotte Hollman, MD, M. Cristina Torres, BS, Maria Szekeresova, MS, and Sandra Schneider, PhD

474 **Immunocytochemical and Virological Characteristics of HIV-associated Inflammatory Myopathies: Similarities with Seronegative Polymyositis**
Isabel Illa, MD, Avindra Nath, MD, and Marinos Dalakas, MD

482 **Cold-induced Brain Edema and Infarction Are Reduced in Transgenic Mice Overexpressing CuZn-Superoxide Dismutase**
P. H. Chan, PhD, G. Y. Yang, MD, S. F. Chen, PhD, E. Carlson, BS, and C. J. Epstein, MD

487 **The Erythrocyte-type Glucose Transporter in Blood Vessels of Primary and Metastatic Brain Tumors**
Sami I. Harik, MD, and Uros Roessmann, MD

492 **Epidemiology of Encephalitis in Children: A 20-Year Survey**
Marjaleena Koskiniemi, MD, PhD, Jukka Rautonen, MD, PhD, Eeva Lehtokoski-Lehtiniemi, MD, and Antti Vaheri, MD, PhD

498 **Coculture with Autologous Myotubes of Cytotoxic T Cells Isolated from Muscle in Inflammatory Myopathies**
Reinhard Hohlfeld, MD, and Andrew G. Engel, MD

508 **Acetylcholine Receptor–specific T-Lymphocyte Clones in the Normal Human Immune Repertoire: Target Epitopes, HLA Restriction, and Membrane Phenotypes**
Marco Salvetti, Stefan Jung, Shau-Feng Chang, Hans Will, Berthold C. G. Schalke, and Hartmut Wekerle, MD

517 **Lhermitte-Duclos Disease and Cowden Disease: A Single Phakomatosis**
George W. Padberg, MD, PhD, Johannes D. L. Schot, MD, G. Jan Vielvoye, MD, PhD, Gerard Th. A. M. Bots, MD, PhD, and Frits C. de Beer, MD

524 **Eosinophilia Myalgia Syndrome: I. Immunocytochemical Evidence for a T-Cell–mediated Immune Effector Response**
Alison M. Emslie-Smith, MD, PhD, Andrew G. Engel, MD, Joseph Duffy, MD, and Carolyn A. Bowles, MD

529 **Altered Excitatory and Inhibitory Amino Acid Receptor Binding in Hippocampus of Patients with Temporal Lobe Epilepsy**
John W. McDonald, PhD, Elizabeth A. Garofalo, MD, Terry Hood, MD, J. Chris Sackellares, MD, Sid Gilman, MD, Paul E. McKeever, MD, PhD, Juan C. Troncoso, MD, and Michael V. Johnston, MD

542 **The Role of Prolactin in Autoimmune Demyelination: Suppression of Experimental Allergic Encephalomyelitis by Bromocriptine**
Peter N. Riskind, MD, PhD, Luca Massacesi, MD, Teresa H. Doolittle, PA-C, MHP, and Stephen L. Hauser, MD

548 **Serial Gadolinium-enhanced Magnetic Resonance Imaging Scans in Patients with Early, Relapsing-Remitting Multiple Sclerosis: Implications for Clinical Trials and Natural History**
Jonathan O. Harris, MD, Joseph A. Frank, MD, Nicholas Patronas, MD, Dale E. McFarlin, MD, and Henry E. McFarland, MD

Brief Communications

556 **Temporal Relationships Between Plasma and Cerebrospinal Fluid Pharmacokinetics of Levodopa and Clinical Effect in Parkinson's Disease**
C. W. Olanow, MD, L. L. Gauger, BA, and J. M. Cedarbaum, MD

560 **Fabry Disease: Detection of 13-bp Deletion in α-Galactosidase A Gene and Its Application to Gene Diagnosis of Heterozygotes**
Satoshi Ishii, PhD, Hitoshi Sakuraba, MD, Michie Shimmoto, MS, Reiko Minamikawa-Tachino, MS, Tadashi Suzuki, MD, and Yoshiyuki Suzuki, MD

564 **Central Sleep Apnea and Arterial Compression of the Medulla**
Masahito Miyazaki, MD, Toshiaki Hashimoto, MD, Noriko Sakurama, MD, Tsutomu Yoshimoto, MD, Masanobu Tayama, MD, and Yasuhiro Kuroda, MD

566 **Mitochondrial Dysfunction in Multiple Symmetrical Lipomatosis**
Samuel F. Berkovic, MD, Frederick Andermann, MD, Eric A. Shoubridge, PhD, Stirling Carpenter, MD, Yvon Robitaille, MD, Eva Andermann, MD, PhD, Calvin Melmed, MD, and George Karpati, MD

569 **Fatal Varicella-Zoster Virus Meningoradiculitis Without Skin Involvement**
Aud N. Dueland, MD, Mary Devlin, BS, John R. Martin, MD, Ravi Mahalingam, PhD, Randall Cohrs, PhD, Herbert Manz, MD, Irene Trombley, MD, and Donald Gilden, MD

Letters

573 **Altered Glucose Metabolism in Microvessels from Patients with Alzheimer's Disease**
Sami I. Harik, MD, and Joseph C. LaManna, PhD

573 **Intellectual Functioning in Treated Wilson's Disease**
Alice Medalia, PhD, and I. Herbert Scheinberg, MD

574 **Dysarthria–Clumsy Hand Syndrome or Homolateral Ataxia and Crural Paresis?**
Yves De Smet, MD

575 **Adenosine and Seizure Termination**
M. Dragunow

575 **Reply**
Jerome H. Chin, MD, PhD

575 **Carbamazepine and the Heart**
Mario Puletti, MD, Cesare Iani, MD, Mario Curione, MD, Massimo Trappolini, MD, and Mario Manfredi, MD

NO 6 JUNE 1991

Original Articles

577 **Medullary Catecholaminergic Neurons in the Normal Human Brain and in Parkinson's Disease**
Clifford B. Saper, MD, PhD, Denise M. Sorrentino, MD, Dwight C. German, PhD, and Sonsoles deLacalle, MD, PhD

585 **Cerebrovascular Abnormalities in Pediatric Stroke: Assessment Using Parenchymal and Angiographic Magnetic Resonance Imaging**
Max Wiznitzer, MD, and Thomas J. Masaryk, MD

590 **The Acetylcholine-induced Flare Response in Evaluation of Small Fiber Dysfunction**
Eduardo E. Benarroch, MD, and Phillip A. Low, MD

596 **The European Stroke Prevention Study (ESPS): Results by Arterial Distribution**
Juhani Sivenius, MD, PhD, Paavo J. Riekkinen, Sr, MD, PhD, Philippe Smets, MD, PhD, Markku Laakso, MD, PhD, and Armand Lowenthal, MD, PhD

601 **Strongly Succinate Dehydrogenase–reactive Blood Vessels in Muscles from Patients with Mitochondrial Myopathy, Encephalopathy, Lactic Acidosis, and Stroke-like Episodes**
Hitomi Hasegawa, MD, Taro Matsuoka, MD, Yu-ichi Goto, MD, and Ikuya Nonaka, MD

606 **Zidovudine Myopathy: A Distinctive Disorder Associated with Mitochondrial Dysfunction**
C. Mhiri, MD, M. Baudrimont, PhD, G. Bonne, MSc, C. Geny, MD, F. Degoul, MSc, C. Marsac, MD, E. Roullet, MD, and R. Gherardi, MD

615 **Suppression of Experimental Autoimmune Encephalomyelitis by Oral Administration of Myelin Antigens: IV. Suppression of Chronic Relapsing Disease in the Lewis Rat and Strain 13 Guinea Pig**
Staley A. Brod, MD, Ahmad al-Sabbagh, MD, Raymond A. Sobel, MD, David A. Hafler, MD, and Howard L. Weiner, MD

623 **Benefits of Monitoring Plasma Levodopa in Parkinson's Disease Patients with Drug-induced Chorea**
Jacob I. Sage, MD, Margery H. Mark, MD, Denise M. McHale, MD, Patricia K. Sonsalla, PhD, and Dawn Vitagliano, BA

629 **Epileptogenic Effect of Hypoxia in the Immature Rodent Brain**
F. E. Jensen, MD, C. D. Applegate, PhD, D. Holtzman, MD, PhD, T. R. Belin, MS, and J. L. Burchfiel, PhD

638 **Epilepsy Surgery in the Posterior Cortex**
Warren T. Blume, MD, FRCP(C), Sharon E. Whiting, MD, FRCP(C), and John P. Girvin, MD, FRCS(C)

646 **Motor Responses after Transcranial Electrical Stimulation of Cerebral Hemispheres with a Degenerated Pyramidal Tract**
Wolfgang Fries, MD, Adrian Danek, MD, and Thomas N. Witt, MD

651 **Neocortical Damage during HIV Infection**
Clayton A. Wiley, MD, PhD, Eliezer Masliah, MD, Mitchel Morey, MD, Cindy Lemere, MS, Richard DeTeresa, BS, Marjorie Grafe, MD, PhD, Lawrence Hansen, MD, and Robert Terry, MD

658 **Intracerebral Hemorrhage: External Validation and Extension of a Model for Prediction of 30-Day Survival**
Stanley Tuhrim, MD, James M. Dambrosia, PhD, Thomas R.Price, MD, Jay P. Mohr, MD, Philip A. Wolf, MD, Daniel B. Hier, MD, and Carlos S. Kase, MD

664 **Chorea-Acanthocytosis: Abnormal Composition of Covalently Bound Fatty Acids of Erythrocyte Membrane Proteins**
Tetsuo Sakai, MD, Yasunobu Antoku, MD, Hiroshi Iwashita, MD, Ikuo Goto, MD, Keiji Nagamatsu, MD, and Hiroaki Shii, MD

Brief Communications

670 **High-Speed Memory Scanning in Parkinson's Disease: Adverse Effects of Levodopa**
W. Poewe, MD, W. Berger, MD, Th. Benke, MD, and L. Schelosky, MD

673 **Positron Emission Tomography Suggests That the Rate of Progression of Idiopathic Parkinsonism Is Slow**
Mohit H. Bhatt, MD, DM, Barry J. Snow, MBChB, FRACP, W. R. Wayne Martin, MD, FRCPC, Brian D. Pate, PhD, Thomas J. Ruth, PhD, and Donald B. Calne, DM, FRCP(Lond), FRCPC

683 **Fatal Disseminated Hemorrhagic Toxoplasmic Encephalitis As the Initial Manifestation of Acquired Immunodeficiency Syndrome**
Eelco F. M. Wijdicks, MD, Jan C. C. Borleffs, MD, Andy I. M. Hoepelman, MD, and Gerard H. Jansen, MD

677 **The Time Course and Magnitude of Spontaneous Recovery of Parkinsonism Produced by Intracarotid Administration of 1-Methyl-4-Phenyl-1,2,3,6,-Tetrahydropyridine to Monkeys**
Roger Kurlan, MD, Michael H. Kim, BA, and Don M. Gash, PhD

680 **Deletion of Mitochondrial DNA in Patients with Combined Features of Kearns-Sayre and MELAS Syndromes**
Mary L. Zupanc, MD, Carlos T. Moraes, MSc, Sara Shanske, PhD, Craig B. Langman, MD, Emma Ciafaloni, MD, and Salvatore DiMauro, MD

Letters

687 **Paraneoplastic Cerebellar Autoantibodies Associated with Gynecological Cancer Bind to Myenteric Plexus Neurons**
Hans J. Altermatt, MD, Carol L. Williams, PhD, and Vanda A. Lennon, MD, PhD

688 **Guillain-Barré Syndrome and Plasmapheresis in Childhood**
David A. Griesemer, MD, and Mary I. Johnson, MD

688 **Guillain-Barré Syndrome and Plasmapheresis in Childhood**
H. Royden Jones, Jr, MD, and Deborah Young Bradshaw, MD

689 **Reply**
Mark A. Epstein, MD, and John T. Sladky, MD

689 **The Diagnosis of Multiple System Atrophy**
Tommaso Caraceni

690 **Reply**
D. J. Brooks

690 **Results of the Questionnaire Concerning the Conduct of Personal Health of the Members of the Members of the American Neurological Association**

691 **Historical Aspects of Guillain-Barré Syndrome**
Michael Rubin, MD, FRCP(C)

691 **Reply**
A. K. Asbury, MD

Indexes to Volume 29

693 **Author Index**

696 **Subject Index**

Regular Departments

692 **Books**